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SWIDLER BERLIN SHEREFF FRIEDMAN, LLP
3000 K STREET, NW
BOX IP
WASHINGTON, DC 20007

EXAMINER

FLEURANTIN, JEAN B

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 08/13/2003

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/917,763

Applicant(s)

HORNICK, MARK

Examiner

Jean B Fleurantin

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-120 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-120 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

DETAILED ACTION

1. This is in response to the Application filed on July 31, 2001.
2. Claims 1-120 are presented for examination.

Drawings

3. The Examiner accepts the drawings.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-10, 13-19, 21, 23-40, 43-49, 51, 53-70, 73-79, 81, 83-100, 103-109, 111 and 113-120 are rejected under 35 U.S.C. 102(2) as being anticipated by U.S. Patent No. 6,266,668 issued to Vanderveldt et al. ("Vanderveldt").

Art Unit: 2172

As per claims 1, 61 and 91, Vanderveldt teaches a data mining agent executing in a computer system, a method of data mining as claimed comprises the steps of examining a request queue comprising at least one request for data mining processing (thus, the destination data sites are evaluated to determine if relevant information is present in the destination data site, if relevant information is present, this data site is assigned a relevance score and presented to the user requesting the query; which is equivalent to examining a request queue comprising at least one request for data mining processing)(see cols. 2-3, lines 67-4);

determining if the at least one request for data mining processing can be processed (thus, the dynamic search engine 100 data mines the specific profile to determine what other related topics of interest would be relevant and of greatest interest to the user; which is readable as determining if the at least one request for data mining processing can be processed)(see col. 8, lines 46-50);

accepting the at least one request for data mining processing if it is determined that the at least one request for data mining processing can be processed (thus, once the user has entered the data, the specific profile is output to data mining search engine twelve, the dynamic search engine 100 data mines the specific profile to determine what other related topics of interest would be relevant and of greatest interest to the user; which is readable as accepting the at least one request for data mining processing if it is determined that the at least one request for data mining processing can be processed)(see col. 8, lines 44-50); and

processing the accepted request for data mining processing in the computer system (thus, once the user has received the information they will be asked if they would like to see more information, each time the user requests additional information it will be presented subsequent to

Art Unit: 2172

the most recent, most relevant information previously presented; which is equivalent to processing the accepted request for data mining processing in the computer system)(see col. 9, lines 31-34).

As per claims 2, 32, 62 and 92, Vanderveldt teaches the method as claimed, wherein the determining step comprises the steps of determining if an algorithm required to process the at least one request for data mining processing is supported by the computer system, (see col. 4, 34-38);

if the algorithm required to process the at least one request for data mining processing is supported, determining whether the computer system is available for additional processing, (see col. 4, 34-36);

if the computer system is not available for additional processing, determining whether the computer system will become available for additional processing before other computer systems that might process the at least one request, (see col. 9, lines 14-17);

if the computer system is available for additional processing, or if the computer system will become available for additional processing before other computer systems that might process the at least one request, determining whether the computer system will be able to complete requested processing in an allotted time, (see col. 9, lines 49-53); and

if the computer system will be able to complete the requested processing in the allotted time, determining that the computer system can process the at least one request for data mining processing, (see col. 10, lines 16-19).

As per claims 3, 33, 63 and 93, Vanderveldt teaches the method as claimed, wherein the at least one request for data mining processing comprises data defining at least one algorithm

Art Unit: 2172

that must be performed in order to perform the requested data mining processing, (see col. 4, 34-36).

As per claims 4, 34, 64 and 94, the limitations of claims 4, 34, 64 and 94 are rejected in the analysis of claim 3, and these claims are rejected on that basis.

As per claims 5, 35, 65 and 95, Vanderveldt teaches the method as claimed, wherein the step of determining if an algorithm required to process the at least one request for data mining processing is supported comprises comparing the data defining at least one algorithm that must be performed in order to perform the requested data mining processing with data defining algorithms that are supported by the computer system, (see col. 4, 34-36).

As per claims 6, 36, 66 and 96, Vanderveldt teaches the method as claimed, wherein the data defining at least one algorithm that must be performed in order to perform the requested data mining processing and the data defining algorithms that are supported by the computer system are in extensible markup language format, (see col. 10, lines 19-21).

As per claims 7, 37, 67 and 97, Vanderveldt teaches the method as claimed, wherein the step of determining whether the computer system is available for additional processing comprises the step of determining whether available idle time of the computer system is greater than a predefined or a dynamically calculated threshold, (see col. 4, lines 60-65).

As per claims 8, 38, 68 and 98, Vanderveldt teaches the method as claimed, wherein the computer system comprises a plurality of processors and the step of determining whether the computer system is available for additional processing comprises the step of determining whether any of the plurality of processors is available for additional processing (thus, as with the web servers the amount of necessary bandwidth will be a function of number of concurrent

Art Unit: 2172

users; which is readable as determining whether any of the plurality of processors is available for additional processing)(see col. 9, lines 59-61).

As per claims 9, 39, 69 and 99, the limitations of claims 9, 39, 69 and 99 are rejected in the analysis of claim 7, and these claims are rejected on that basis.

As per claims 10, 40, 70 and 100, the limitations of claims 10, 40, 70 and 100 are rejected in the analysis of claim 1, and these claims are rejected on that basis.

As per claims 13 and 103, in addition to the discussion in claim 1, Vanderveldt further teaches determining that the computer system is overloaded, (see col. 8, lines 25-27);

querying at least one other computer system to determine whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system (thus, the database query scripts direct the simple searching and querying of the databases, access custom data-mining solutions developed for some of the databases and allow visualization for exploration of the databases; which is readable as querying at least one other computer system to determine whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system)(see col. 10, lines 16-19);

determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system (thus, data-mining 'tools' are discrete and specific, certain models are appropriate for certain tasks, when explanation of a particular result is important 'as in credit approval/rejections' and the available data supports the generation/formulation of rules an expert or fuzzy logic system might be appropriate, when optimization of a particular quantity is important, a genetic algorithm or

Art Unit: 2172

another evolutionary algorithm might be more useful, when prediction/estimation is important, the neural network training algorithm might be used; which is readable as determining whether the at least one other computer system can complete the data mining processing task being performed on the computer system faster than the computer system)(see col. 4, lines 28-38).

As per claims 14, 44, 74 and 104, Vanderveldt teaches the method as claimed, wherein the migrating step comprises the steps of reserving the at least one other computer system for migration, (see col. 10, lines 66-67);

interrupting and checkpointing the data mining processing task on the computer system, (see col. 4, lines 29-33); and

enqueueing a request to the at least one other computer system for continued processing of the data mining processing task, (see cols. 2-3, lines 67-4).

As per claims 15, 45, 75 and 105, Vanderveldt teaches the method as claimed, wherein the step of determining that the computer system is overloaded comprises the step of determining that the computer system is overloaded if a utilization of a processor of the computer system is greater than a predefined threshold for a predefined time, (see col. 4, lines 60-65).

As per claims 16, 46, 76 and 106, Vanderveldt teaches the method as claimed, wherein the querying step comprises the step of generating an estimate of a time to complete the data mining processing task, (see col. 9, lines 44-50).

As per claims 17, 27, 47, 57, 77, 87, 107 and 117, Vanderveldt teaches the method as claimed, wherein the generating step comprises the steps of estimating an amount of processing that must be performed to complete the data mining processing task, (see cols. 2-3, lines 67-4);

estimating a processor utilization that will be available to process the data mining processing task, (see col. 4, 34-36); and

estimating a time to complete the data mining processing task based on the estimate of the amount of processing that must be performed, the estimate of available processor utilization, and a speed of the processor, (see col. 9, lines 44-50).

As per claims 18, 48, 78 and 108, the limitations of claims 18 and 108 are rejected in the analysis of claim 8, and these claims are rejected on that basis.

As per claims 19, 49, 79 and 109, Vanderveldt teaches the method as claimed, wherein the step of determining whether the at least one other computer system can complete a data mining processing task being performed on the computer system faster than the computer system (see cols. 2-3, lines 67-4) as claimed comprises the step of estimating a time to complete the data mining processing task for the at least other computer system based on the estimate of the amount of processing that must be performed to complete the data mining processing task, speed of the at least one other computer system, (see col. 9, lines 44-50).

As per claims 21, 51, 81 and 111, Vanderveldt teaches the method as claimed, wherein the querying step further comprises the step of transmitting to the at least one other computer system the estimate of the amount of processing that must be performed to complete the data mining processing task, (see col. 9, lines 44-50); and

receiving from the at least one other computer system an estimate of a time to complete the data mining processing task for the at least one other computer system, (see col. 4, 34-36).

As per claim 23, in addition to the discussion in claim 1, Vanderveldt further teaches determining a remaining cost of completing processing of a data mining processing task being

Art Unit: 2172

processed by the computer system (thus, data-mining 'tools' are discrete and specific, certain models are appropriate for certain tasks, when explanation of a particular result is important 'as in credit approval/rejections' and the available data supports the generation/formulation of rules an expert or fuzzy logic system might be appropriate, when optimization of a particular quantity is important, a genetic algorithm or another evolutionary algorithm might be more useful, when prediction/estimation is important, the neural network training algorithm might be used; which is readable as determining a remaining cost of completing processing of a data mining processing task being processed by the computer system)(see col. 4, lines 28-38);

determining whether the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system, (see col. 4, lines 28-34).

As per claims 24, 54, 84 and 114, in addition to the discussion in claims 1 and 23, Vanderveldt further teaches determining that the processor utilization of the computer system is greater than a predefined amount higher than the processor utilization of the at least one other computer system, (see col. 8, 46-50).

As per claims 25, 55, 85 and 115, the limitations of claims 25, 55, 85 and 115 are rejected in the analysis of claim 17, and these claims are rejected on that basis.

As per claims 26, 56, 86 and 116, Vanderveldt teaches the method as claimed, wherein the remaining cost of completing processing of a data mining processing task is determined based on a time to 3 complete processing of the data mining processing task and on additional factors, 4 including actual costs of use of the computer system, (see col. 4, lines 28-38).

As per claims 28, 58, 88 and 118, Vanderveldt teaches the method as claimed further comprises the step of estimating additional factors, including actual costs of use of the computer system, (see col. 4, lines 28-34).

As per claims 29, 59, 89 and 119, Vanderveldt teaches the method as claimed, wherein the step of determining whether the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system comprises the step of soliciting a bid for completing processing of the data mining processing task from the at least one other computer system, (see col. 4, lines 34-38).

As per claims 30, 60, 90 and 120, in addition to the discussion in claim 29, Vanderveldt further teaches transmitting a request for a bid to the at least one other computer system, the request for the bid including information relating to the amount of processing that must be performed to complete the data mining processing task, (see col. 4, lines 28-38).

As per claim 31, in addition to the discussion in claim 1, Vanderveldt further teaches a processor operable to execute computer program instructions, (see col. 2, lines 60-63);

a memory operable to store computer program instructions executable by the processor, (see col. 2, lines 4-10).

As per claims 43 and 73, in addition to the discussion in claim 13, Vanderveldt further teaches a processor operable to execute computer program instructions, (see col. 2, lines 60-63);

a memory operable to store computer program instructions executable by the processor, (see col. 2, lines 4-10).

As per claims 53, 83 and 113, in addition to the discussion in claim 1, Vanderveldt further teaches determining a remaining cost of completing processing of a data mining

Art Unit: 2172

processing task being processed by the computer system (thus, data-mining 'tools' are discrete and specific, certain models are appropriate for certain tasks, when explanation of a particular result is important 'as in credit approval/rejections' and the available data supports the generation/formulation of rules an expert or fuzzy logic system might be appropriate, when optimization of a particular quantity is important, a genetic algorithm or another evolutionary algorithm might be more useful, when prediction/estimation is important, the neural network training algorithm might be used; which is readable as determining a remaining cost of completing processing of a data mining processing task being processed by the computer system)(see col. 4, lines 28-38);

determining whether the at least one other computer system can complete processing of the data mining processing task at a lower cost than the computer system, (see col. 4, lines 28-36).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-12, 20, 22, 41-42, 50, 52, 71-72, 80, 82, 101, 102, 110 and 112 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,266,668 issued to Vanderveldt et al. ("Vanderveldt").

As per claims 11, 20, 22, 41, 50, 52, 71, 80, 82, 101, 102, 110 and 112, in addition to the discussion in claim 1, Vanderveldt does not explicitly indicate estimating a time to availability of the computer system; exchanging an estimate of a time to availability of the at least one other computer system; and comparing the time to availability. However, Vanderveldt implicitly indicates as use grows a search response time per use can be estimated, this will enable projection of the number of servers necessary per use, see col. 9, lines 46-51. It would have been obvious to a person of ordinary skill in the art to modify the teaching of Vanderveldt with estimating a time to availability of the computer system; exchanging an estimate of a time to availability of the at least one other computer system; and comparing the time to availability. This modification would allow the teachings of Vanderveldt to provide a method for dynamic data mining and on line community data sites are evaluated to determine if relevant information is present in the destination data site, (see cols. 2-3, lines 66-2).

As per claims 12, 42 and 72, in addition to the discussion in claims 1 and 11, Vanderveldt further teaches comparing the time to completion for the requested processing on the computer system with time allocation information included in the request for data mining processing, (see col. 9, lines 48-51).

Prior Art

6. The prior art of record and not relied on upon is considered pertinent to applicant's disclosure. Aggarwal et al. U.S. Patent No. 5,920,855 relates to an online method of data mining of data items in a large database. Weiss et al. GB 2 336 007 A, relates to data storage and retrieval.

Art Unit: 2172

Contact Information

7. Any inquiry concerning this communication from examiner should be directed to Jean Bolte Fleurantin at (703) 308-6718. The examiner can normally be reached on Monday through Friday from 7:30 A.M. to 6:00 P.M.

If any attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Mrs. KIM VU can be reached at (703) 305-8449. The FAX phone numbers for the Group 2100 Customer Service Center are: *After Final* (703) 746-7238, *Official* (703) 746-7239, and *Non-Official* (703) 746-7240. NOTE: Documents transmitted by facsimile will be entered as official documents on the file wrapper unless clearly marked "**DRAFT**".


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2100 Customer Service Center receptionist whose telephone numbers are (703) 306-5631, (703) 306-5632, (703) 306-5633.



Jean Bolte Fleurantin

August 8, 2003

JBf/



JEAN M. CORRIELUS
PRIMARY EXAMINER